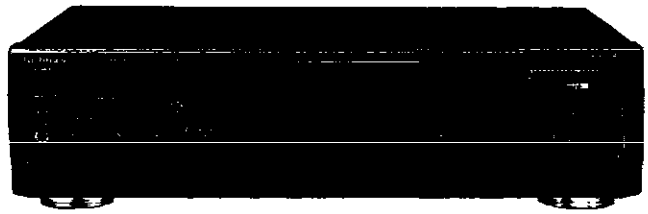
Technics

Stereo Cassette Deck

RS-BX747/RS-BX646

Operating Instructions

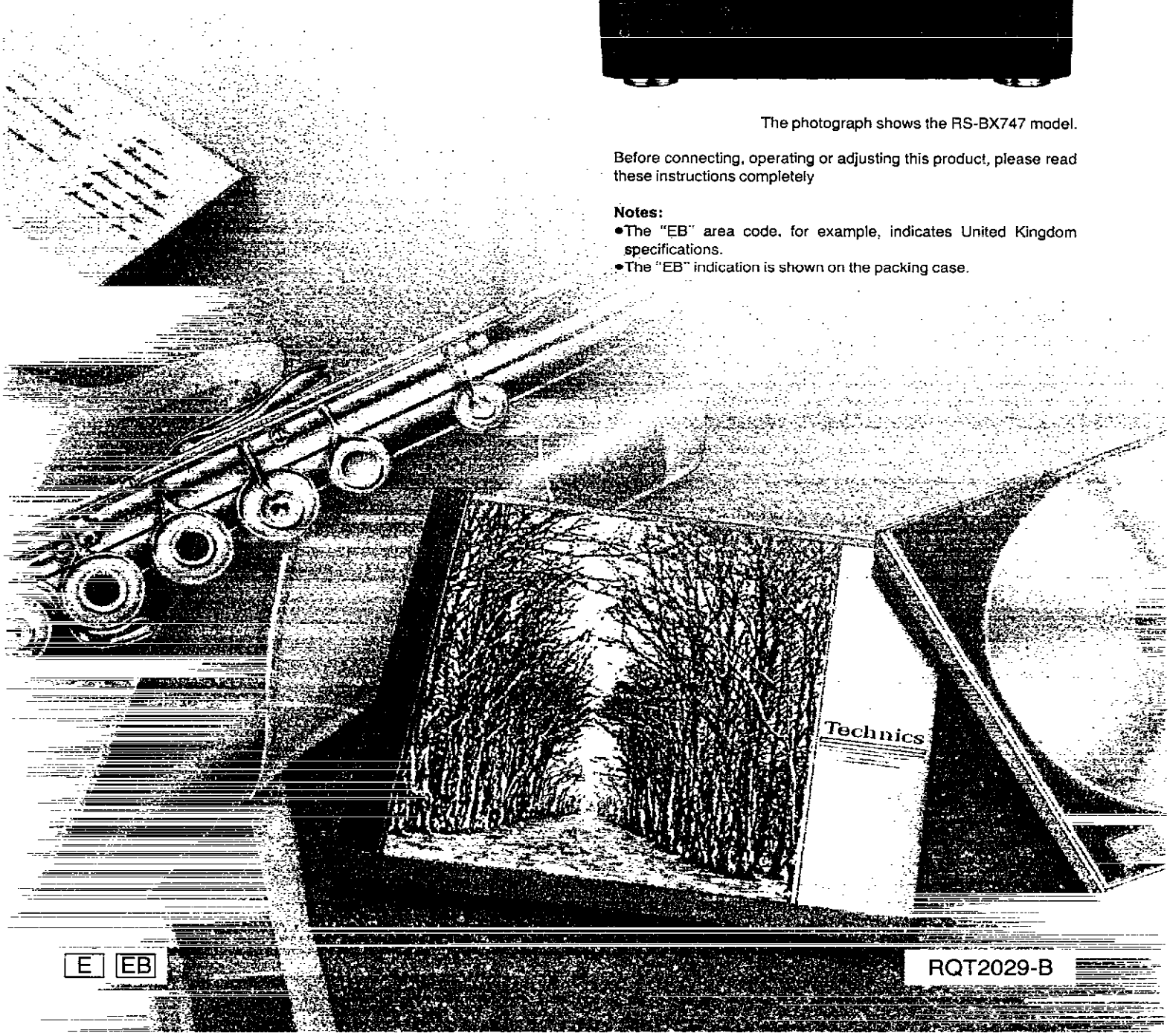


The photograph shows the RS-BX747 model.

Before connecting, operating or adjusting this product, please read these instructions completely

Notes:

- The "EB" area code, for example, indicates United Kingdom specifications.
- The "EB" indication is shown on the packing case.



E EB

RQT2029-B

Dear customer

Thank you for purchasing this product.
For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the RS-BX747 and RS-BX646 models. These operating instructions, however, primarily explain the operation of the RS-BX747 model.

Contents

Suggestions for Safety 2
Caution for AC Mains Lead (For United Kingdom) 3
Supplied Accessories 4
Connections 4
Front Panel Controls and Functions 5
Playback (Basic play) 8
Convenient Features for Playback 11
Recording 12
Convenient Features for Recording 14
After Recording 16
Timer Recording/Playback 17
Concerning Cassette Tapes 18
Maintenance 18
Troubleshooting Guide 19
Technical Specifications ..... **Back cover**

Suggestions for Safety

■ Use a standard AC wall outlet

1. **Use from an AC power source of high voltage, such as that used for an air conditioner, is very dangerous.**
   A fire might be caused by such a connection.
2. **A DC power source cannot be used.**
   Be sure to check the power source carefully, especially on a ship or other place where DC is used.

■ Grasp the plug when disconnecting the power supply cord

1. **Wet hands are dangerous.**
   A dangerous electric shock may result if the plug is touched by wet hands.
2. **Never place heavy items on top of the power supply cord, nor force it to bend sharply.**

■ Place the unit where it will be well ventilated

Place this unit at least 10 cm (4") away from wall surfaces, etc.

■ Avoid places such as the following:

In direct sunlight or in other places where the temperature is high.
In places where there is excessive vibration or humidity.
Such conditions might damage the cabinet and/or other component parts and thereby shorten the unit's service life.

■ Be sure to place the unit on a flat, level surface

If the surface is inclined, a malfunction may result.

■ Never attempt to repair nor reconstruct this unit

A serious electric shock might occur if this unit is repaired, disassembled or reconstructed by unauthorized persons, or if the internal parts are accidentally touched.

■ Take particular care if children are present

Never permit children to put anything, especially metal, inside this unit. A serious electric shock or malfunction could occur if articles such as coins, needles, screwdrivers, etc. are inserted through the ventilation holes, etc. of this unit.

■ If water is spilled on the unit

Be extremely careful if water is spilled on the unit, because a fire or serious electric shock might occur. Immediately disconnect the power cord plug, and consult with your dealer.

■ Avoid spray-type insecticides

Insecticides might cause cracks or "cloudiness" in the cabinet and plastic parts of this unit. The gas used in such sprays might, moreover, be ignited suddenly.

■ Never use alcohol or paint thinner

These and similar chemicals should never be used, because they might cause flaking or cloudiness of the cabinet finish.

■ Disconnect the power supply cord if the unit will not be used for a long time

If the unit is left for a long time with the power ON, this not only will shorten its useful operation life, but also may cause other trouble.

■ If trouble occurs

If, during operation, the sound is interrupted or indicators no longer illuminate, or if an abnormal odour or smoke is detected, immediately disconnect the power cord plug, and contact with your dealer or an Authorized Service Center.

Caution for AC Mains Lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

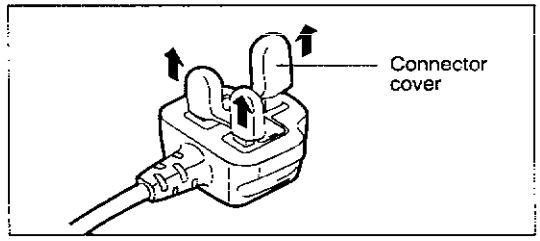
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚.

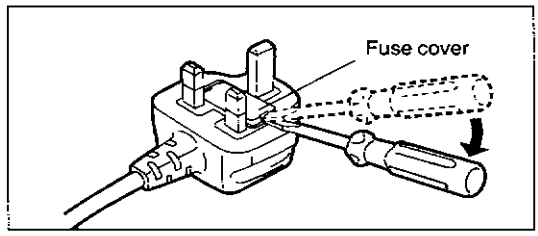
Before use

Remove the connector cover as follows.

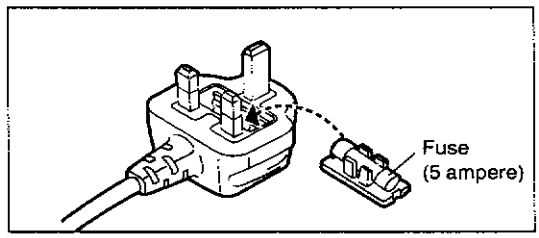


How to replace the fuse

1. Remove the fuse cover with a screwdriver.



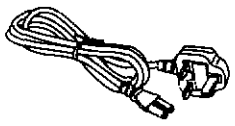
2. Replace the fuse and attach the fuse cover.

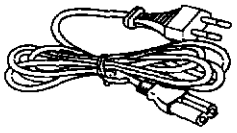


Supplied Accessories

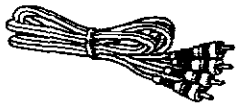
AC power supply cord 1

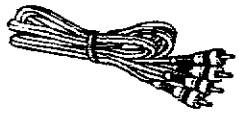
(For United Kingdom) **(For others)**





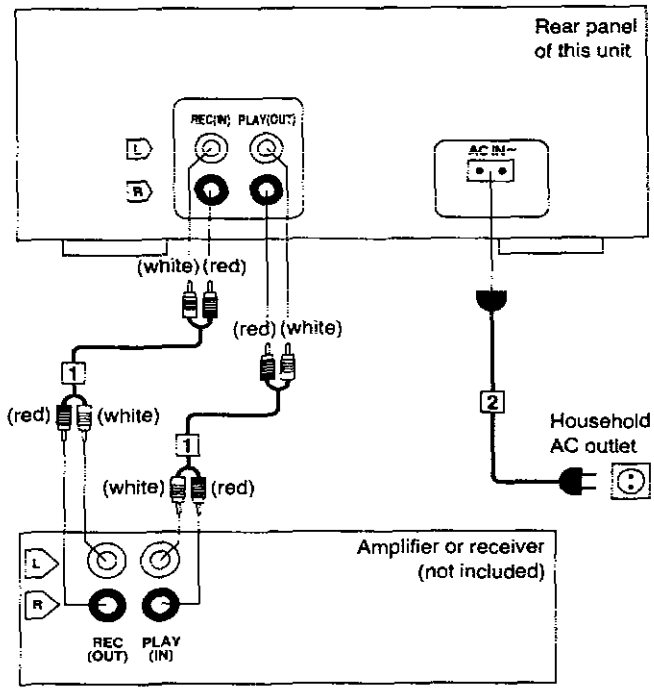
Stereo connection cables 2





Connections

Make connections in the numbered sequence by using the included cables.



The above illustration shows an example of connections made when this unit is combined with a Technics hi-fi component system, and shows only the connections to be made to and from this unit in that combination.

1 Connect the stereo connection cables.

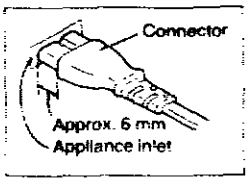
FOR UNITED KINGDOM ONLY
BE SURE TO READ THE CAUTION FOR AC POWER SUPPLY CORD ON PAGE 3 BEFORE PROCEEDING TO THE STEP 2.

2 Connect the AC power supply cord after you have connected all other cables and cords.

The configuration of the AC outlet and AC power supply cord differs according to area.

Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.

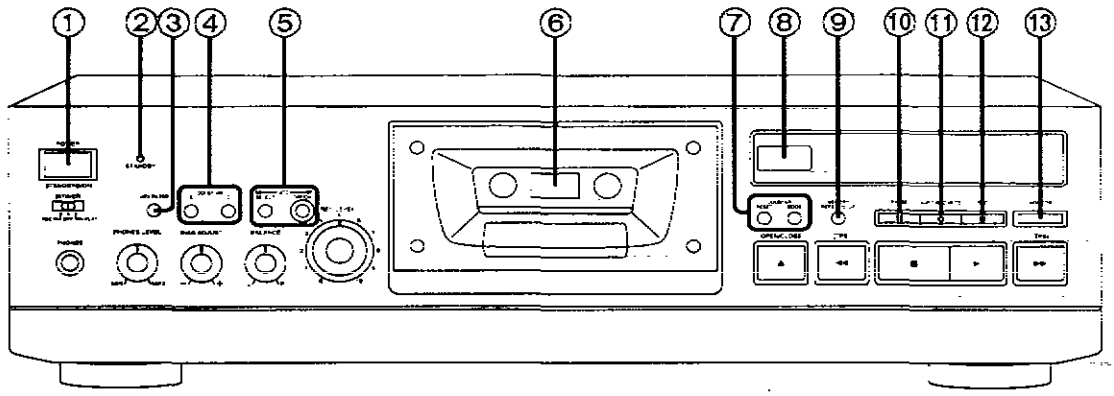


Note:
Avoid letting the cables touch each other as much as possible, otherwise noise will be generated.

Placements hints
If this unit is placed near a receiver or a tuner, a "hum" noise may be heard during tape playback, recording, or AM reception of the receiver or the tuner.
If this occurs, leave as much space as possible between the units, or place them where is the least amount of "hum".

Front Panel Controls and Functions

Control section



RS-BX747

① Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻ /ON)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② Standby indicator (STANDBY)

When the unit is conncted to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

③ Multiplex filter button (MPX FILTER)

This prevents the Dolby NR circuit from operating in error when FM stereo broadcasts are recorded using the noise reduction function. (See page 16.)

④ Dolby noise reduction buttons (DOLBY NR B, C)

These buttons are used to reduce the hissing noise heard from the tape. This unit is provided with both the B-type and C-type noise reduction systems. (See pages 8, 10 and 12.)

⑤ ATC buttons (ATC)

These buttons are used to set the most appropriate bias, level and equalizer according to the type of tapes. (See page 13.)

SELECT: Each time the button is pressed, the bias position changes as follows:
Standard→High→Low

OFF/ON: This button is used to perform or to cancel ATC (Auto Tape Calibration).

⑥ Cassette holder

⑦ Tape counter buttons (COUNTER)

(See page 10.)

RESET: This button is used to reset the tape counter indication to "000_" or "00.00".

MODE: This button is used to select the tape/linear counter indication.

⑧ Remote control signal sensor

You can operate this unit from the remote control equipped with Technics amplifier.

⑨ Memory button (MEMORY REPEAT/STOP)

This button is used to activate the memory repeat play and locate the designated point during playback or recording. (See pages 11 and 15.)

⑩ Pause button (❚❚ PAUSE)

This button is used to temporarily stop the tape playback or recording. (See pages 8 and 12.)

⑪ Automatic record muting button (▢ AUTO REC MUTE)

This button is used to make a silent interval on the tape while recording is in progress. (See page 15.)

⑫ Record button (● REC)

This button is used to set deck to the recording standby mode. (See page 12.)

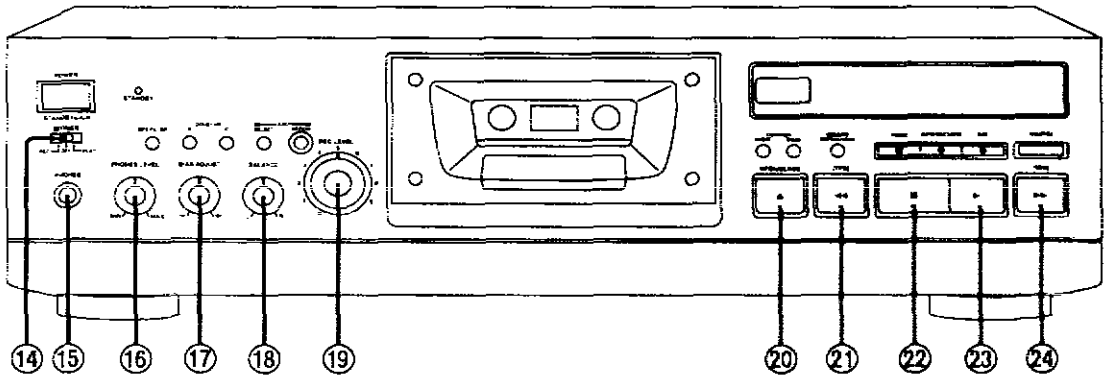
⑬ Monitor button (MONITOR)

In order to check the recording condition, the sound being recorded and the sound from the sound source can be alternately selected by pressing this button. (The corresponding indicator will illuminate.) (See page 14.)

Front Panel Controls and Functions

(continued)

Control section



RS-BX747

⑭ **Timer switch (TIMER)**
This switch is used to automatically start a tape recording or begin tape playback at a certain time, selected by an optional timer. (See page 17.)

⑮ **Headphones jack (PHONES)**

⑯ **Headphones volume control (PHONES LEVEL)**
(See page 8.)

⑰ **Bias control (BIAS ADJUST)**
RS-BX747 only
This control is used to adjust the sound characteristics in the high frequency range during recording. (See page 14.)

⑱ **Recording balance control (BALANCE)**
This control is used to balance the left and right sound levels during recording. (See page 12.)

⑲ **Recording level control (REC LEVEL)**
This control is used to regulate the recording level. (See page 12.)

⑳ **Cassette holder open/close button (▲ OPEN/CLOSE)**
This button is used to open or close the cassette holder. (See page 8.)

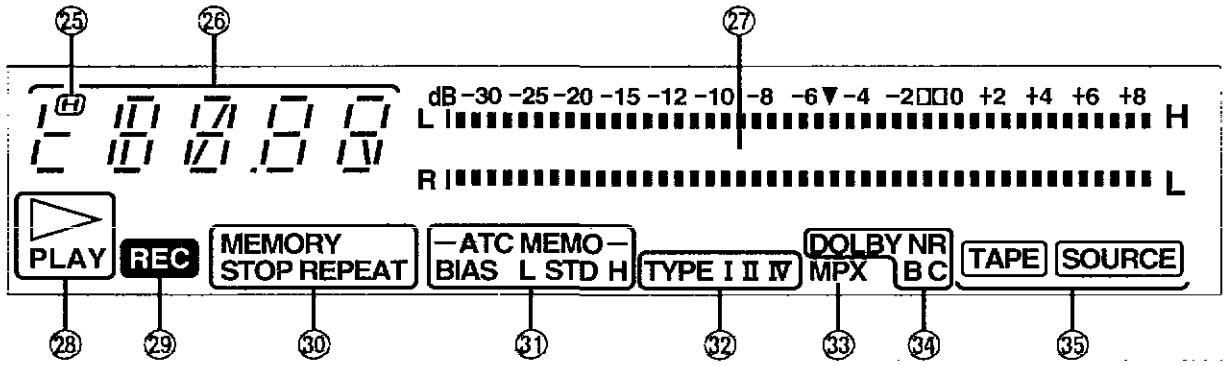
㉑ **Rewind/TPS button (◀◀ [TPS])**
This button is used to rewind the tape or to easily and quickly search for the beginning of a tune. (See page 9.)

㉒ **Stop button (■)**
This button is used to stop the tape movement. (See page 8.)

㉓ **Playback button (▶)**
This button is used to start the playback or recording. (See pages 8 and 12.)

㉔ **Fast forward/TPS button (▶▶ [TPS])**
This button is used to advance the tape or to easily and quickly search for the beginning of a tune. (See page 9.)

Display section



㉕ High-speed rewind/fast-forward search indicator (⏩)
Illuminates during high-speed rewind/fast-forward or high speed search.

㉖ Tape counter/ATC display
Normally functions as the tape linear counter display. During ATC (Auto Tape Calibration), displays the present condition of the ATC operation.

㉗ Level meter
Indicates the level of the recorded sound during playback.
Indicates the level being recorded, adjusted by the recording-level control.
Also displays the present condition of the ATC operation.

㉘ Playback indicator (▷ PLAY)
Illuminates in the playback or the recording mode.
Flashes in the pause or recording standby mode.

㉙ Recording indicator (REC)
Illuminates in the recording standby mode or recording mode.

㉚ Memory indicators (MEMORY STOP, MEMORY REPEAT)
Each indicator illuminates to show which of the memory modes was set by the memory button.

㉛ ATC memory indicator (ATC MEMO)
Indicates one of the programs of bias position as follows.
Flashes during ATC (auto tape calibration), and then remains illuminated when the ATC operation is completed.
BIAS STD: Standard
BIAS H: High
BIAS L: Low

㉜ Tape select indicators (TYPE)
The type of tape being used will be automatically detected and the indicator will illuminate.
I: NORMAL
II: CrO_2
IV: METAL

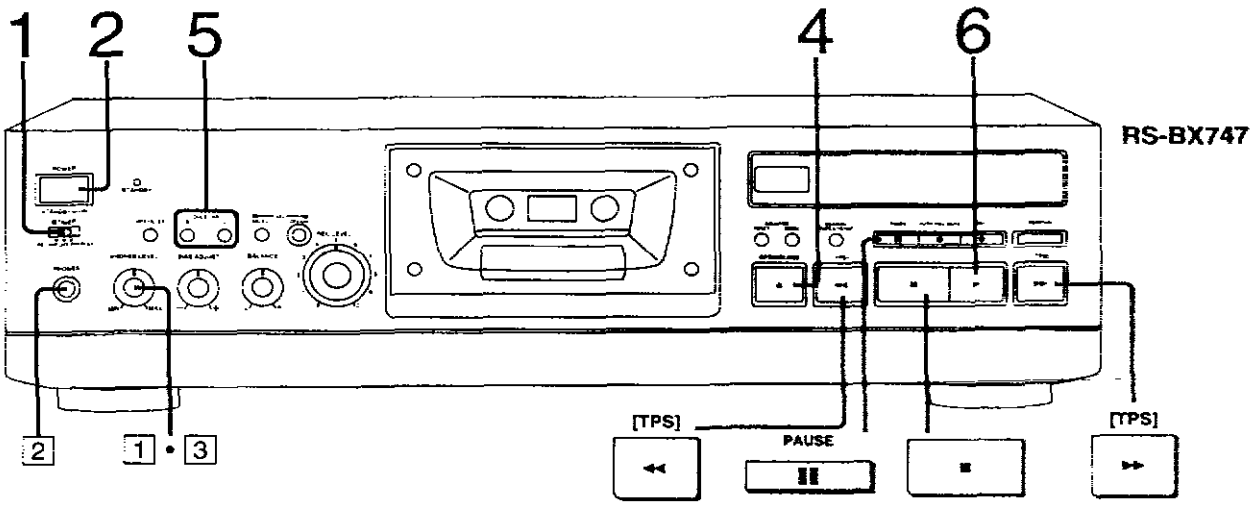
㉝ MPX filter indicator (MPX)
Illuminates to indicate that the multiplex filter is on.

㉞ Dolby noise-reduction indicators (DOLBY NR B, C)
Indicator B or C illuminates when the corresponding noise reduction button (B or C) is pressed.

㉟ Monitor indicators (TAPE , SOURCE)
Each indicator illuminates to show which sound is selected by the monitor switch.

Playback (Basic play)

Either normal, CrO_2, or metal type cassettes can be used.



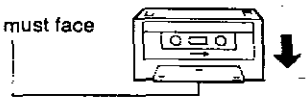
1 Set the timer switch to "OFF".

2 Press POWER STANDBY/ON to turn the unit on.

3 Select the "TAPE" input source on the amplifier.

4 Press OPEN/CLOSE and insert the cassette tape.

The exposed tape must face downward.



The cassette holder will automatically close.

This unit will automatically detects the type of tape being used, and then makes the suitable adjustments of the bias and equalization accordingly.
The tape select indicator will illuminate as follows:

TYPE I: NORMAL
TYPE II: CrO_2
TYPE IV: METAL

5 Press either DOLBY NR B or C to select the appropriate noise reduction system.

(See page 10.)
Set to off if neither of the Dolby noise-reduction systems is to be used.
To cancel Dolby noise reduction, press either B or C again. (DOLBY NR B or C indication will go out.)

6 Press the playback button (►).

The playback indicator will illuminate, and playback will begin.

■ To temporarily stop playback

Press PAUSE.

PAUSE

The playback indicator will begin flashing.
To resume playback, press PAUSE again or press the playback button.

■ To stop playback

Press the stop button (■).

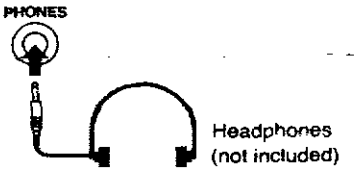
The playback indicator will go out.

■ Listening through headphones

1 Reduce the volume.

2 Connect the headphones (not included) to the headphones jack.

Plug type: 6.3 mm phone plug, stereo type.



3 Adjust the volume.

Turn to the right to increase or turn to the left to reduce.

Note:
Avoid listening for prolonged periods of time to prevent hearing damage.

To fast forward or rewind the tape in the stop mode

Press fast forward button (►►) to fast forward.

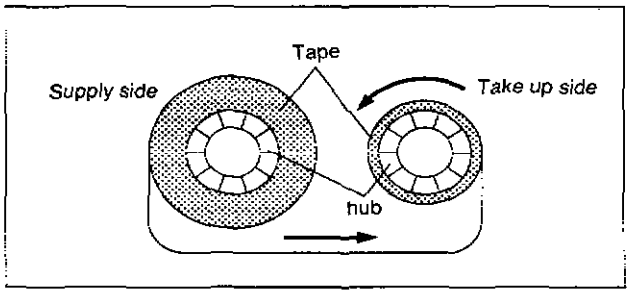
[TPS]

Press rewind button (◄◄) to rewind.

[TPS]

High speed search/rewind/fast forward

On this unit, if there is less tape on the take up side than on the supply side (refer to the illustration below) at the time that the rewind/fast forward operation will automatically be increased to approximately twice the normal speed. This function makes it possible to wind the tape faster when there is a large amount of tape to be wound.



- When there is more tape on the take up side than on the supply side, the tape will be wound at the normal speed.
- If high speed winding is begun from a state in which the tape is partly wound, such as that shown in the illustration above (for example, when the ratio of tape between the two sides is 1:3), high speed winding will continue until the ratio between the two sides reaches 3:1, and then the remaining winding will be done at the normal speed.
- When the winding is begun from either the end or the beginning, all winding will be performed at high speed.

To change from high speed winding to normal speed winding:
Press ◄◄ [TPS], ►► [TPS] while the high speed winding is in progress. (The winding cannot be subsequently changed back to high speed winding, even if the button is pressed again.)

To find the beginning of a tune during playback (TPS: Tape Program Sensor)

Press fast forward button (►► [TPS]) to locate the beginning of the next tune.

[TPS]

The playback indicator will flash rapidly in the search mode.

Press rewind button (◄◄ [TPS]) to locate the beginning of the current or a previous tune.

[TPS]

The playback indicator will flash rapidly in the search mode.

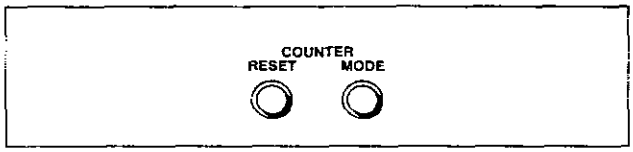
After the beginning of the tune is located, playback will start automatically.

To locate the beginning of a tune that is several tunes before (or after) the recent tune, repeat the search function as many times as necessary.

Note:
This feature might not function correctly under the following circumstances:
- If there is noise between tunes
- If the silent interval between tunes is less than 4 seconds
- If there is a particularly low level of sound or a silent interval at any point in the tune
- When less than 10 seconds have elapsed since the beginning of a tune, or when there is less than 10 seconds to the beginning of the next tune
- In a section where a fade-in or fade-out has been recorded

Playback (continued)

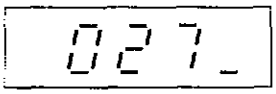
How to use the tape/linear counter



■ Press MODE to switch the tape/linear counter indication.

MODE

Tape-counter display



This display shows the amount of tape movement as a series of consecutive numbers

Linear counter display

This display shows the amount of tape movement in minutes and seconds.

■ Press RESET to reset the indication to "000_" if the counter is in the tape counter mode, or to "00.00" if the counter is in the linear counter mode.

RESET

Tape-counter display

Linear counter display

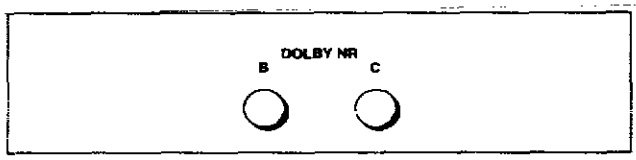
The linear counter of this unit does not function as a clock. Depending on the length of the tape used and the diameter of the cassette's hubs (see the illustration on page 9), etc., there may be a difference between the time displayed by the counter and the actual recording or playback time.

The time difference when an ordinary tape is played on one side from beginning to end is shown in the chart below.

Cassette type	Approx. difference
C46 (large hub), C60, C90	−30 to +30 seconds
C46 (small hub)	÷2 or 3 minutes

The linear counter will display a minus (−) reading if the counter is reset to "00.00" and the tape is then rewound.

About the Dolby noise reduction recording/playback system



The Dolby noise reduction is a system designed to effectively reduce the annoying high frequency "hissing" noise typically heard from tapes. During recording, the system functions to increase the level of the high frequency part of the sound, and then, during playback, that same portion is weakened and returned to the previous level.

This unit includes two types of Dolby noise reduction systems, the Dolby B-type and C-type.

■ Dolby B-type noise reduction

Noise is reduced to about one-third.
Use this system when playing back tapes recorded by the Dolby-B noise reduction system, such as prerecorded music tapes, etc.

■ Dolby C-type noise reduction

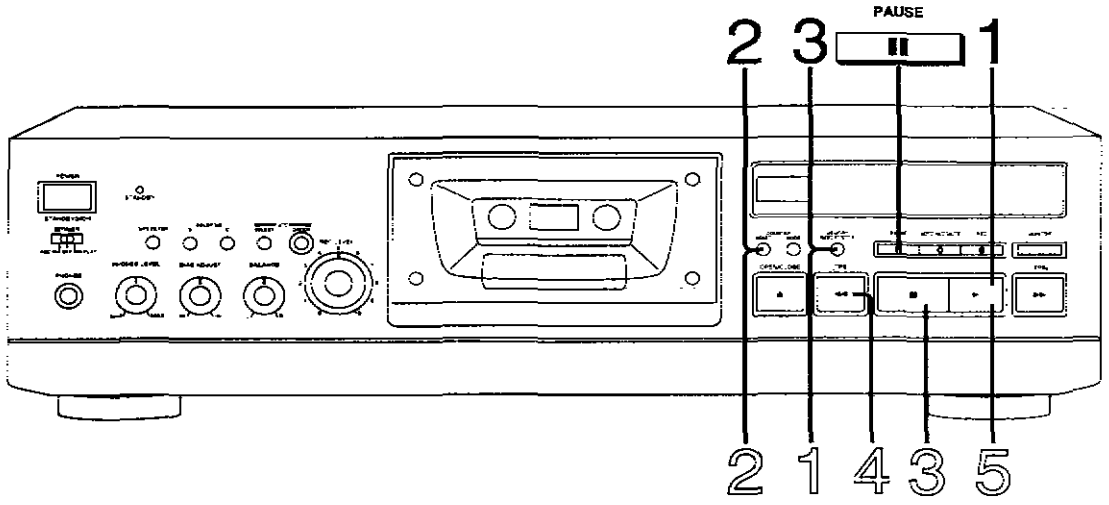
Noise is reduced to about one-tenth.
Use this system for the recording and playback of sound sources that have a wide dynamic range and good tone quality, such as FM broadcasts or live performances, etc.

About the Dolby HX-Pro headroom extension system

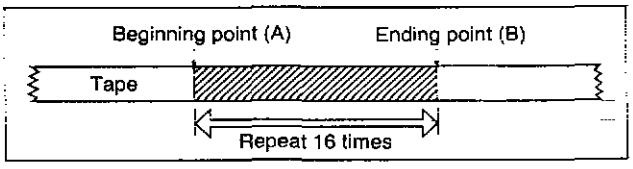
By functioning to improve the maximum output level of the tape's high frequency range, this system permits recordings without a drop of the level of the sound source's high frequency range. In addition, by using the system in parallel with this unit's noise reduction system, recording and playback with a greatly extended dynamic range is possible.

Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen. "DOLBY", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Convenient Features for Playback



Memory repeat play (A-B repeat)



This function can be used only in the playback mode.

1 **Press the playback button.**

2 **Press COUNTER RESET at the point (A) where you want the repetition to begin.**
The counter will be reset to "000_" or "00.00".

3 **Press MEMORY REPEAT/STOP at the point (B) where you want the repetition to end.**
The tape will be rewound to point (A), and the repetition then will begin.
The memory repeat indicator will illuminate.

To stop the repetition temporarily, press PAUSE.

■ To cancel memory repeat

Press MEMORY REPEAT/STOP.

MEMORY REPEAT/STOP

The memory repeat indicator will go out.

Notes:
- The repeat play function will be cancelled if the stop button or ◀◀ [TPS], ▶▶ [TPS] is pressed during repeat play.
- There may be a slight difference (maximum ±4 seconds) between the settings made for specified points and the points at which the tape is actually played during repeat play.

To rewind the tape to the beginning position of playback (memory stop)

The tape is rewound to the designated point and then play can be begun from that point.

1 **In the stop mode, press MEMORY REPEAT/STOP and then begin playback.**
The memory stop indicator will illuminate.

2 **Press COUNTER RESET at the point where you want the tape to rewind.**
The counter will be reset to "000_" or "00.00".

3 **Press the stop button (■).**

4 **Press rewind button (◀◀).**
The unit will rewind the tape to the beginning point, and then automatically stop.

5 **Press the playback button to begin playback again if desired.**

■ To cancel the memory stop function

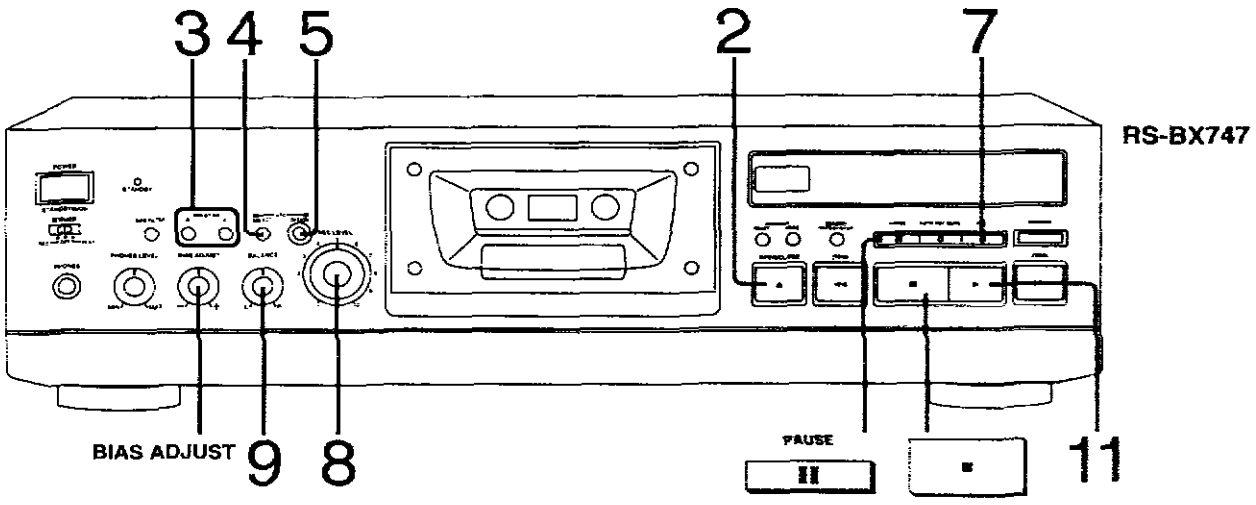
In the stop mode, press MEMORY REPEAT/STOP.

Notes:
- The memory stop function can be used while either the tape counter or the linear counter is displayed, but a change from one to the other cannot be made while memory stop is activating.
- There may be a slight difference (maximum ±4 seconds) between the point where the tape/linear counter was reset and the point where the tape actually stops after rewind.

Recording

Either normal, CrO_2 or metal type cassettes can be used.

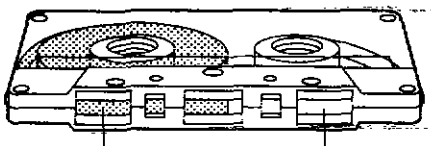
Your attention is drawn to the fact that recording pre-recorded tapes or discs on other published or broadcast material may infringe copyright laws.



Before beginning, be sure to set BIAS ADJUST to the center position (For RS-BX747 only).

1 **Select the input source on the amplifier.**

2 **Insert the cassette into the cassette holder.**
Take up the leader tape before starting a recording.



Leader tape (recording cannot be made)
Magnetic tape (recordings can be made)

3 **Select the Dolby noise reduction system (B or C) to be used.**
Set to off if neither of the Dolby noise reduction systems is to be used.

4 **Press ATC SELECT to select desired bias position.**
Each time you press the button, the indication will change as follows. (See page 13.)

STD → H → L

5 **Press ATC OFF/ON to activate ATC (Auto Tape Calibration).**
ATC will begin, and will be completed in approximately 30 seconds.
For detailed information, see "How to use the Advanced ATC function" on page 13.
(Recording is also possible without performing ATC.)

6 **Play the sound source to be recorded in order to adjust the recording level.**

7 **Press REC.**
The recording indicator will illuminate and the playback indicator will flash continuously. The unit will be in the recording standby mode.

8 **Turn REC LEVEL to adjust the recording level.**
While watching the level on the level meter, turn REC LEVEL so that the peak indication is as high as possible, without exceeding the indication noted below.
Normal, CrO_2 tape: 0
Metal tape: +2

9 **Turn BALANCE to adjust the left/right recording balance.**

10 **Stop playing the source.**

11 **Press the playback button (▶) to start recording, then start playing the source to be recorded from the beginning.**
The playback indicator will illuminate steadily, and the recording will begin.

■ To temporarily stop recording

Press PAUSE.
The playback indicator will begin flashing.

PAUSE

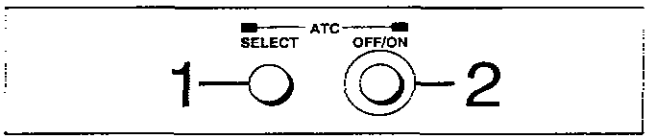
To resume recording, press PAUSE again or press the playback button.

■ To stop recording

Press the stop button (■).

How to use the Advanced ATC function

ATC (Auto Tape Calibration) is the function which identifies the quality of the tape (concerning bias, output level, equalizer) automatically and sets the most desirable recording condition. Besides, to realize your desired sound quality you can set the bias position from three programs equipped with this unit.
It takes about 30 seconds to complete the setting.



Before beginning, wind the tape to the position where you want to make the recording. Because performing the ATC function records a test signal onto the tape, so any material recorded previously will be erased.
ATC can be performed on a tape which is partly wound, but it is not possible at the end of the tape.
Although the tape will be wound back to its original position after ATC has been completed, the position may be slightly moved from the exact original position. Therefore, 2 seconds or more after the previous track, press ATC OFF/ON so as not to erase the meterial previously recorded.

Before beginning, be sure to set BIAS ADJUST to the center position (For RS-BX747 only).

1 Press ATC SELECT to select desired bias position.

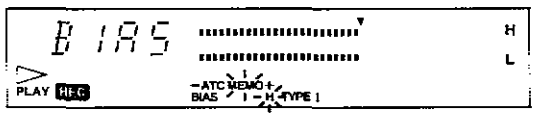
Each time you press the button the display indicates following three programs. Select desired position which fits to the music to be recorded. (Refer to the table below.)

Position	Feature	Suitable music
STD	Creates natural sound (Standard ATC setting)	Popular
H	Emphasizes the bass range	Classic
L	Emphasizes the treble range	Rock

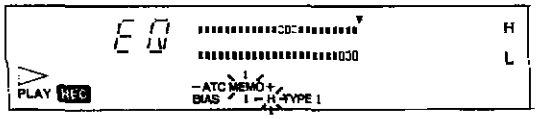
2 While desired bias position is flashing, press ATC OFF/ON to begin ATC.

The display changes as follows while the ATC setting is taking place.

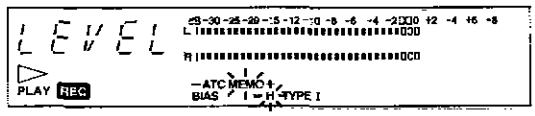
Example:
When you set the bias position to H (high):
① Bias setting in progress.



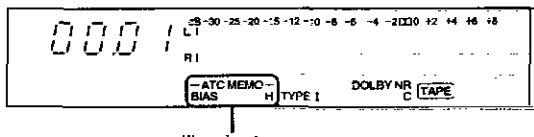
② Equalizer setting in progress.



③ Level setting in progress. (See below.)



④ ATC completed.



Illuminates

"MEMO" indicator rapidly flashes in following cases indicating that ATC is not possible:
- When the end of the tape is reached
- When the tape is damaged
- When the tape is coarse
- When heads are dirty

About Level setting
Tape sensitivity differs according to the quality of the tape. The level setting function is an accomodating feature because it revises the sensitivity of the tape so that it matches the adjusted recording level.

■ To cancel the ATC function while the settings are in progress

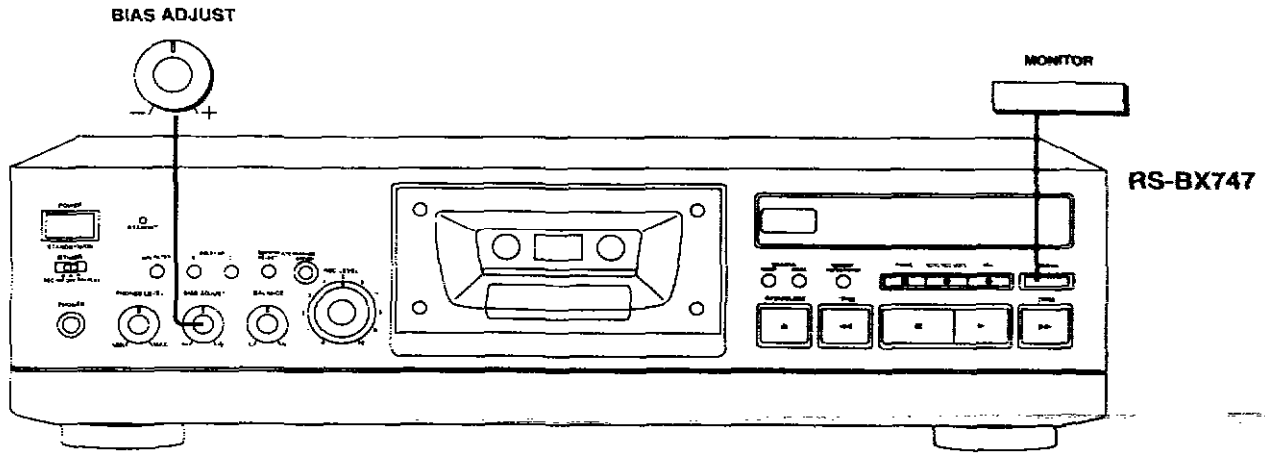
Press the stop button (■).

■ To cancel the ATC settings after the settings are completed

Press ATC OFF/ON.

Notes:
- ATC may not be possible on an old tape or on some special types of tapes.
- Pressing OPEN/CLOSE or POWER will not cancel the ATC setting which has been set. It will remain in the unit's memory until you press the ATC OFF/ON again.

Convenient Features for Recording



To monitor the sound during recording

You can use this function when you connect this unit to the amplifier with the tape monitor or the amplifier with the recording selector.

•When using the amplifier with the tape monitor:

1. **Set both the input selector and the tape monitor to the source to be recorded.**
2. **Begin the recording.**
   SOURCE *indicator will illuminate.*
3. **During recording, press MONITOR on the cassette deck.**
   TAPE indicator will illuminate.
4. **Switch the tape monitor on the amplifier to "TAPE" so that you can monitor the sound which is recorded on the tape.**

•When using the amplifier with the recording selector:

1. **Set both the input selector and the recording selector to the source to be recorded.**
2. **Begin the recording.**
   SOURCE indicator will illuminate.
3. **During recording, press MONITOR on the cassette deck.**
   TAPE indicator will illuminate.
4. **Set the input selector on the amplifier to "TAPE" so that you can monitor the sound which is recorded on the tape.**

■ Adjusting the sound characteristics in the high frequency range (RS-BX747 only)

If ATC has been performed, the bias will be automatically adjusted for a flat frequency response (refer to the graph on the right). If you wish to change the sound characteristics, use the bias control to make the adjustment.

While making a comparison between the sound from the source and the recorded sound at the step 4, turn BIAS ADJUST to make desired sound characteristics.

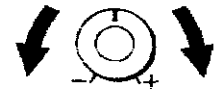
How to operate the amplifier

•When using the amplifier with the tape monitor:
Switch the tape monitor to "TAPE" and "SOURCE" by turns.
•When using the amplifier with the recording selector:
Switch the input selector to "TAPE" and the source being recorded by turns.

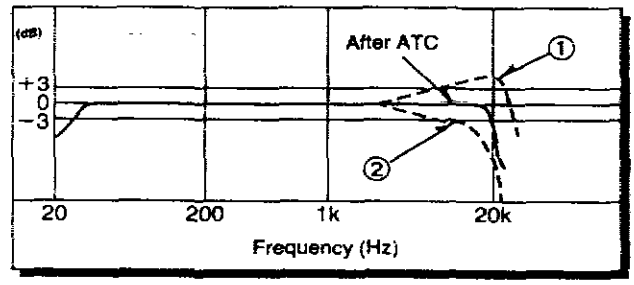
How to adjust the bias

① Bias becomes shallower; the treble characteristics increase.

② Bias becomes deeper; the treble characteristics decrease.

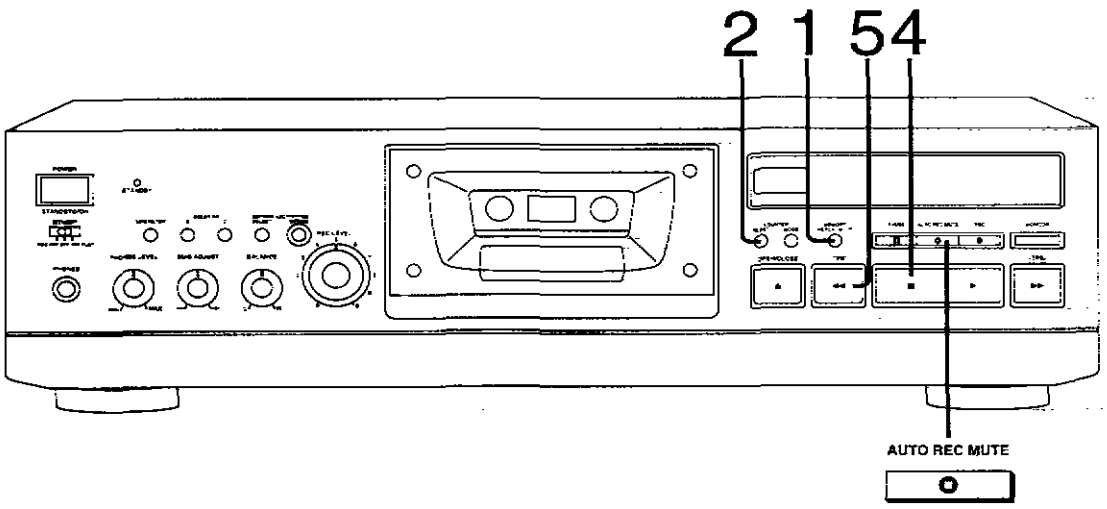


[Adjustment of the tape characteristics during recording]



After completing the bias adjustment, rewind the tape and begin the recording again.

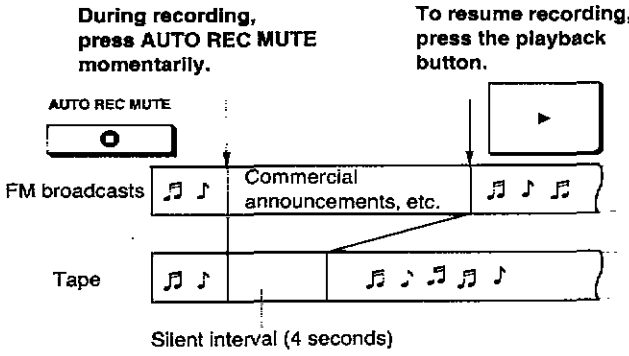
Hint:
The bias readjustment is not needed as long as you continue to use the same type and brand of tape that was used when the adjustment was first made.



Automatic record muting function

By simply pressing AUTO REC MUTE during recording, a silent interval (which is necessary for locating the beginning of a program during playback) can be made.

This feature is also convenient for omitting unwanted material such as commercial messages, etc. during recording.



This unit will record a silent interval (4 seconds long) between programs, and then will change to the recording standby mode.

■ To make a silent interval of more than 4 seconds

Press and hold AUTO REC MUTE for the desired number of seconds.

AUTO REC MUTE

The unit will change to the recording standby mode when the button is released.

To rewind the tape to the beginning point of the recording (memory stop)

By following this procedure the unit can automatically locate and rewind to the beginning point of the recording.

1 **Press MEMORY REPEAT/STOP.**
The memory stop indicator will illuminate.

2 **Press COUNTER RESET.**
The counter will be reset to "000_" or "00.00".

3 **Follow steps 3 through 11 in "Recording" on page 12 to make a recording.**

4 **Press the stop button (■).**

5 **Press rewind button (◀◀).**
The unit will rewind the tape to the beginning point and then stops automatically.

6 **Make a recording again or playback if desired.**
The beginning point still remains in the unit's memory. You can *repeaet steps 4 and 5 as many times as you deslre.*

■ To cancel the memory stop function

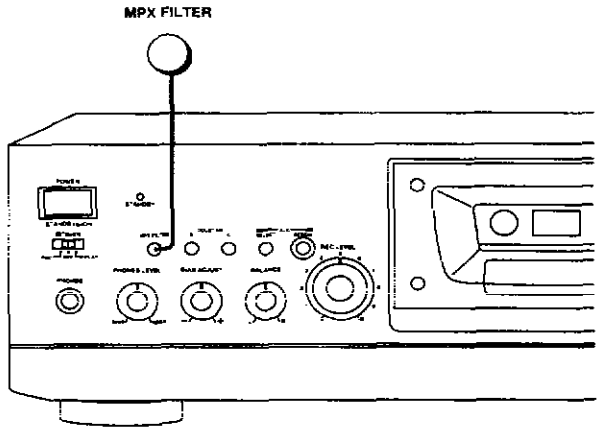
Press the stop button and then press MEMORY REPEAT/STOP.

Notes:
- The memory stop function can be used while either the tape counter or the linear counter is displayed, but a change from one to the other cannot be made during the memory stop mode.
- There may be a slight difference (maximum ±4 seconds) between the point where the tape/linear counter was reset and the point where the tape actually stops after rewind.

Convenient Features for Recording

(continued)

MPX filter



When FM stereo broadcasts are recorded using the Dolby noise reduction system, the pilot signal and certain other signals included with the broadcast signals are subjected to Dolby noise reduction processing as music signals. This results in a deterioration of the sound quality and an impairment of the noise reduction effect.
The MPX filter is designed to filter out just the 19 kHz frequency which is the frequency of the pilot signal.

Pilot signal
This signal is used to separate the FM broadcast signals into the left and right channels to produce the stereo effect. It is generated at a frequency of 19 kHz which is extremely close to the frequency of the music signals.

Press MPX FILTER before recording FM broadcast.

MPX FILTER

The MPX filter indicator will illuminate.

■ To switch off MPX filter

Press MPX FILTER again.

MPX FILTER

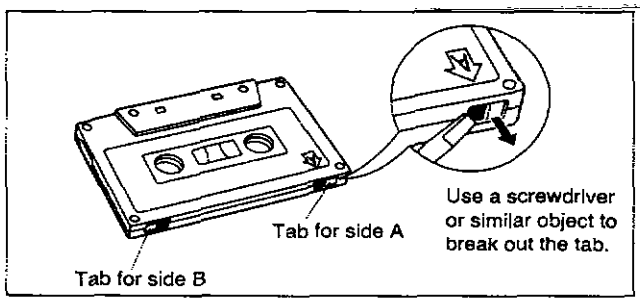
The MPX filter indicator will go out.

Notes:
- Press MPX FILTER to set to off (the indicator will go out) when recording sound from a source other than FM broadcasts, such as CDs, with a wide frequency band.
- MPX filter functions only in the recording mode.

After Recording

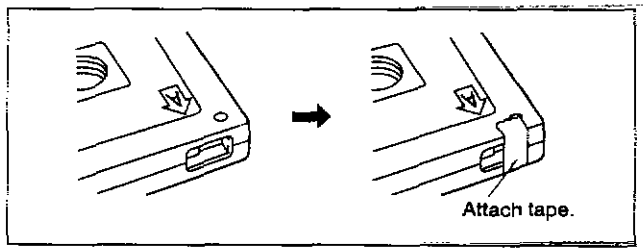
To prevent erasure of recorded sound

Remove the erase-prevention tabs (thus preventing recording).



■ To re-record on a protected cassette

Cover the slot with adhesive tape.

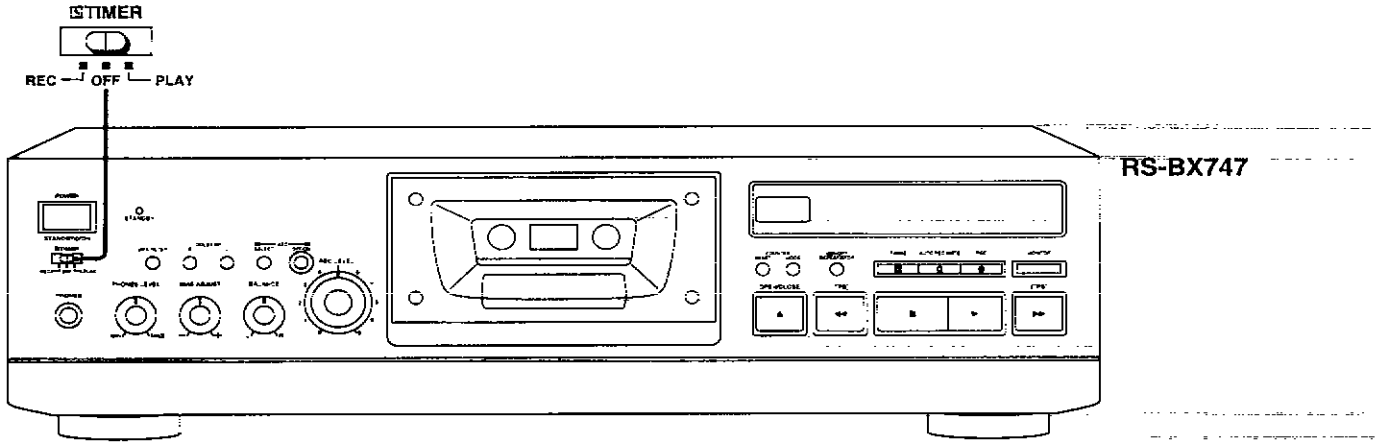


To erase recorded sound

When new recordings are made on a pre-recorded tape, all sounds recorded on that portion of the tape are automatically erased. To erase a tape without making a new recording, follow the steps below.

1. **Insert the recorded cassette into the cassette holder.**
2. **Set REC LEVEL to 0.**
3. **Press DOLBY NR B or C to set to off.**
   The Dolby noise reduction indicator will then go out.
4. **Press REC.**
5. **Press the playback button (▶).**

Timer Recording/Playback



If this unit and the receiver (or tuner) are connected to an audio timer, recording of a radio broadcast or tape playback will automatically begin at the desired time. Timer recording or playback is also possible by using a tuner with the timer. Connect the AC power supply cord of this unit to the power source outlet of the timer. (See the operating instructions of the timer for detailed information.)

Timer recording

1 **Prepare for recording.**
Follow steps 1 to 10 of "Recording" on page 12. After adjusting the recording level and left/right balance, press the stop button.

2 **Set the timer at desired recording "start" time.**
Power will be switched to STANDBY.

3 **Set the timer switch to the "REC" position.**

At the specified time, the power will be switched on and the audio source will be recorded.

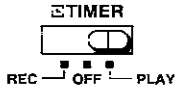
When timer recording has finished, set the timer switch to OFF.

Timer playback

1 **Rewind the tape to the position from which you want playback to begin.**
(See page 9.)

2 **Set the timer at desired playback "start" time.**
Power will be switched to STANDBY.

3 **Set the timer switch to the "PLAY" position.**



At the specified time, the power will be switched on and playback will begin.

When timer playback has finished, set the timer switch to OFF.

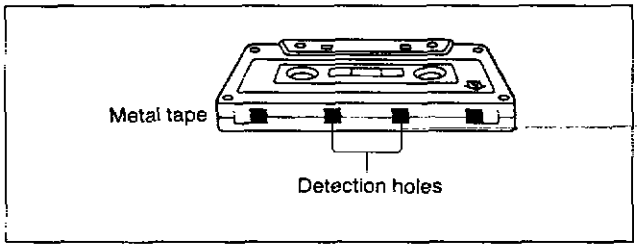
Concerning Cassette Tapes

Selection of cassette tapes

■ **Cassette tapes exceeding 90 minutes**
These tapes are handy for their long playback and recording time. As they are thin, tend to stretch and may become entangled in the machine, be careful about stopping and starting, rewinding and fast forwarding these tapes in short intervals.

■ **Fe-Cr tapes (TYPE III)**
The high frequency range will be emphasized, and flat frequency response characteristics cannot be obtained.

■ **Metal tape without detection holes in the cassette**
Recordings will be very distorted. (There is no problem with playing back, however.)



Tape slack

Tape slack may cause the tape to break.

Use a pencil or similar object to take up the slack.

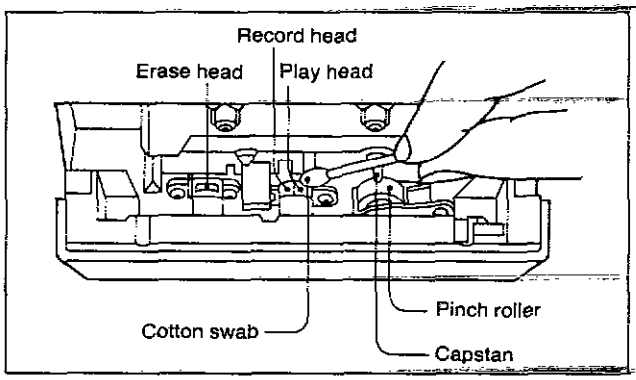
Improper tape storage

You can damage tape if you store in the following ways;
- In high temperature [35°C (95°F) or higher] or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- In direct sunlight

Maintenance

Head care

To assure good sound quality for recording and playback, be sure to clean the heads after approximately every 10 hours of use.
1) Press the open/close button to open the cassette holder.
2) Disconnect the AC power supply cord from the AC outlet.
3) Clean the heads, pinch roller and the capstan shaft with a cotton swab (or with a soft, lint-free cloth) slightly moistened with alcohol.
   Do not use any solution other than alcohol for head cleaning.



Head demagnetization

In order to maintain good sound quality during recording and playback, it is recommended that the heads should be demagnetized if distortion or poor sound quality persist after cleaning the heads.
If the heads become magnetized they could create noise in recordings, loss of high-frequency response, or erasure of valuable recordings. Several types of head demagnetizers are available and may be purchased at local electronics supply stores. Follow the instructions that are supplied with the device.
Do not bring any type of metal objects or tools such as magnetic screwdrivers in contact with the head assembly.

Maintenance of external surfaces

To clean this unit, use a soft, dry cloth.
For very dirty surfaces, dip a soft cloth in a mild soap-and-water solution and wring well. After cleaning, wipe with a soft, dry cloth.
Never use alcohol, paint thinner, benzine, nor a chemically treated cloth to clean this unit.
Such chemicals may damage the unit's finish.

Troubleshooting Guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.
If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

Problem	Probable cause(s)	Suggested remedy
Tape moves but no sound is heard.	The volume control of the amplifier is set to its minimum position.	Adjust the volume control to the desired level.
	The input selector of the amplifier is not set to the TAPE position.	Set to the TAPE position.
Distorted sound.	The recording level is too high.	Select the appropriate recording level.
Previously recorded sound has not been erased.	Erase head is dirty.	Clean the head.
Sound output is hoarse or unsteady.	Head is dirty.	Clean the head.
	Tape is damaged.	Try operation with a new cassette; if there is no problem with the new cassette, discard the damaged cassette.
Poor sound quality (especially in the high treble and low bass ranges).	The correct type of the Dolby noise reduction is not set.	Set it to the correct position.
Sound is low, poor tone, intermittent sound, noise.	Head(s) , capstan and/or pinch roller are dirty or tape is damaged.	Clean the head(s), capstan and/or pinch roller, or try a new cassette.
A "hum" noise is heard during tape playback or recording.	This unit is placed too close to a receiver, amplifier or tuner.	Leave as much space as possible between the units, or place them where there is the least amount of "hum".
Recording is not possible.	The recording level control is at the "0" position.	Select the appropriate recording level.

Technical Specifications

355

■ CASSETTE DECK SECTION

Deck system	Stereo cassette deck
Track system	4-track, 2-channel
Recording system	AC bias
Bias frequency	80 kHz
Erasing system	AC erase
Heads	Recording head [Permalloy (combination)] × 1
	Playback head [Permalloy (combination)] × 1
	Erasing head (Double-gap ferrite) × 1
Motors	
RS-BX646	Capstan drive (DC SERVO MOTOR) × 1
	Reel table drive (DC MOTOR) × 1
	Cassette holder open/close (DC MOTOR) × 1
RS-BX747	Capstan drive (Quartz DD MOTOR) × 1
	Reel table drive (DC MOTOR) × 1
	Cassette holder open/close (DC MOTOR) × 1
Tape speed	4.8 cm/sec. (1 − 7/8 ips)
Wow and flutter	
RS-BX646	0.07% (WRMS)
	±0.2% (DIN)
RS-BX747	0.05% (WRMS)
	±0.14% (DIN)
Fast forward and rewind times	
	Approx. 50 seconds with C-60 cassette tape
Frequency response (Dolby NR off)	
NORMAL	30 Hz–17 kHz, ±3 dB
	20 Hz–18 kHz (DIN)
CrO_2	30 Hz–18 kHz, ±3 dB
	20 Hz–19 kHz (DIN)
METAL	30 Hz–19 kHz, ±3 dB
	20 Hz–20 kHz (DIN)

S/N (Signal level=max recording level, CrO_2 type tape)	
NR off	57 dB (A weighted)
Dolby B NR on	66 dB (A weighted)
Dolby C NR on	74 dB (A weighted)
Input sensitivity and impedance	
REC (IN)	100 mV/47 kΩ
Output voltage and impedance	
PLAY (OUT)	500 mV/500Ω
HEADPHONES	190 mV/(8Ω)
	(Load impedance 8Ω–600Ω)

■ GENERAL

Power consumption	
RS-BX646	21 W
RS-BX747	23 W
Power supply	AC 50 Hz/60 Hz, 230 V – 240 V
Dimensions (W×H×D)	430 × 125 × 293 mm
Weight	4.6 kg

Note:
Specifications are subject to change without notice
Weight and dimensions are approximate.

For United Kingdom
This apparatus was produced to BS 800.

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

Printed in Japan

RQT2029-B
F0493L0